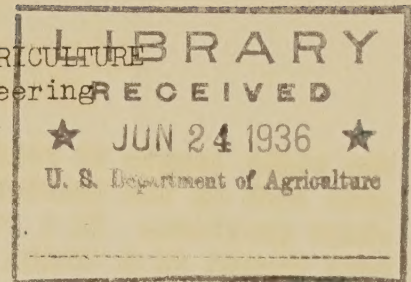


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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Engineering



A TELESCOPING WAGON TONGUE

A new type of wagon tongue that will save time and labor for the farmer and will practically eliminate danger of bodily injury in tractor coupling has been developed by two engineers -- Claude K. Shedd of the U. S. Bureau of Agricultural Engineering, and E. V. Collins of Iowa Agricultural Experiment Station. It is called a telescoping tongue because it operates like a telescope -- can be made long or short. It can be used with tractor or with horses.

Using the new tongue in harvesting corn with a mechanical picker, one man can pick, haul and crib the crop. The new tongue is also advantageous for pulling a wagon part of the time by team and part of the time by tractor or truck, and for trailing wagons short distances with tractor or truck when frequent coupling and uncoupling is necessary. When wagons are equipped with the new tongue and with rear drawbars, one man can conveniently couple two or more together in a train.

The inconvenience and loss of time in using the regular hitch equipment in hauling and cribbing corn harvested with a mechanical picker prompted the engineers to design the new type of tongue. In 1933 they made and used the tongue in field studies. At a recent field day at Ames, Iowa, they demonstrated it to farm machinery manufacturers and to farmers who manifested considerable interest in its possibilities.

In coupling a tractor to the ordinary wagon tongue, the tendency of many farmers is to try to do the coupling job with one hand and to keep the other on the clutch lever of the tractor. If for any reason his hand on the clutch should slip, the operator is likely to suffer injury by having the tractor back into him or to have his hand smashed at the coupling. Even when a second man does the coupling he has to exercise care to keep from being hurt. The adjustable tongue, which is about 4 1/2 feet long in its short length and which has a swing of about 45 degrees, practically eliminates this danger for the tractor need only be backed so that its drawbar is within about 4 feet of the wagon hitch for the coupling to be made.

The tongue is made of two sizes of steel pipe, the smaller pipe forming the forward part of the tongue and telescoping into the larger pipe at the rear to shorten the tongue. It is equipped with proper catches and locks to hold it in either long or short positions. In the extended position, the tongue is the right length for a horse hitch.

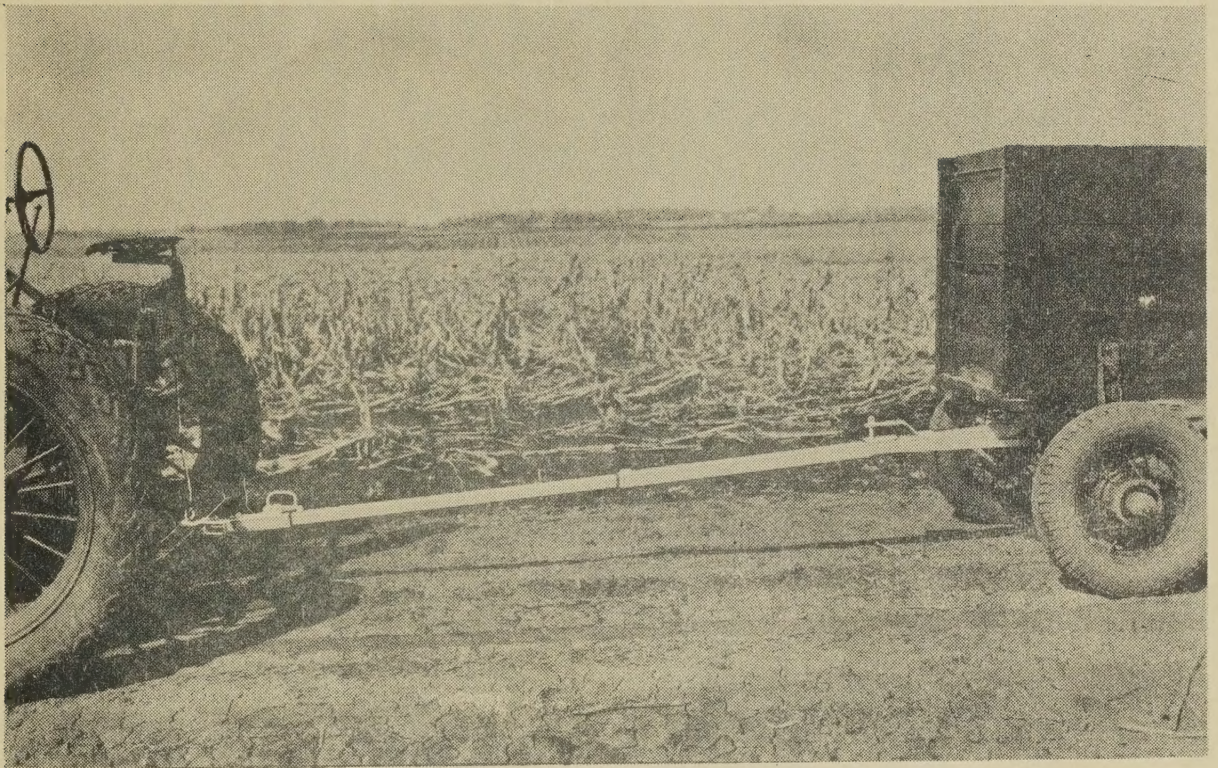
To couple a wagon to a tractor, the operator stops the tractor in position so that its drawbar is within about 4 feet of the end of the wagon tongue, then gets off and unlatches the tongue, pulls it out to

the right length to reach the tractor drawbar. He makes the coupling, gets back on the tractor and backs up until the tongue locks in its short position. In a similar manner one man can easily couple two or more wagons in a train.

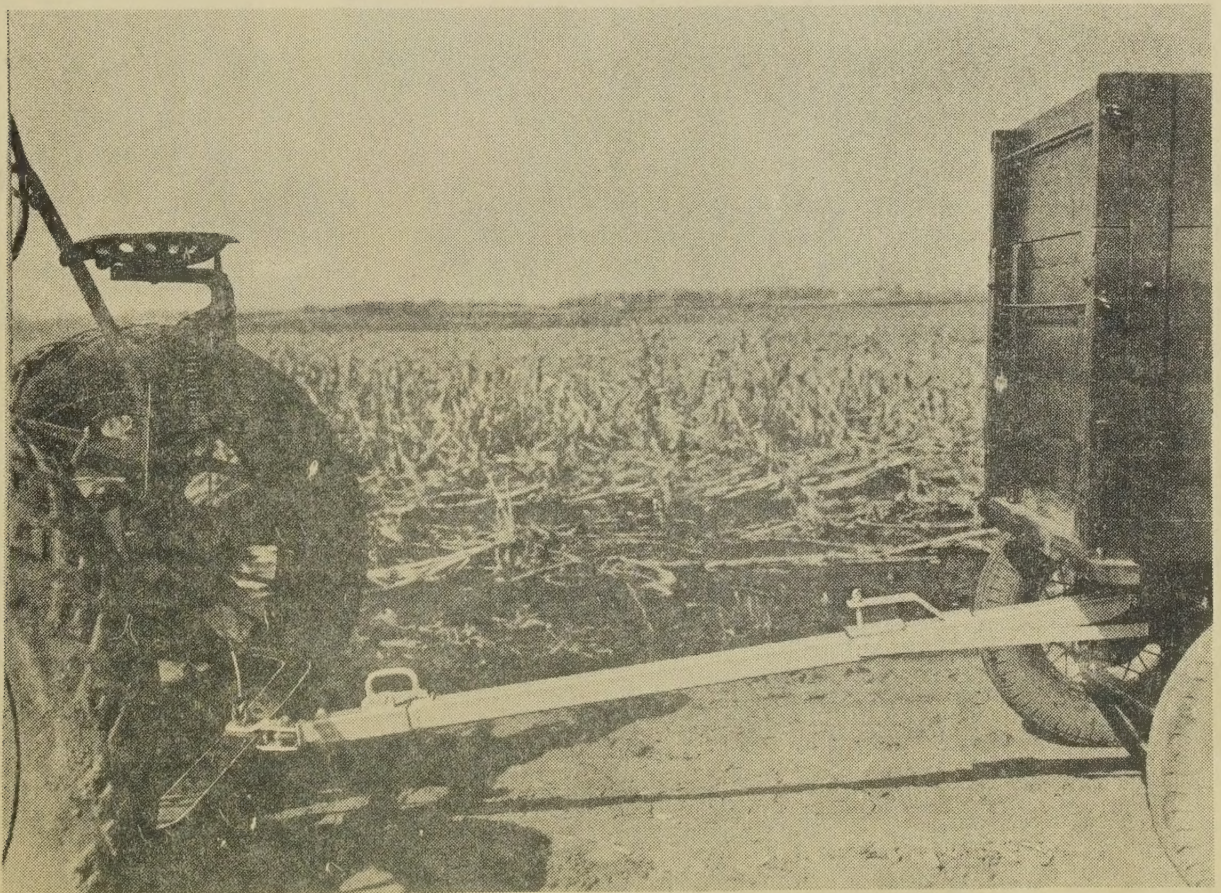
In experimenting with the tongue in harvesting corn, the engineers found that one man with a two-row mounted picker can conveniently pick, load and haul his crop to the crib. He couples three empty wagons in a train behind the tractor when going to the field. Upon reaching the field, he drops off the third wagon at the end of the field and pulls two wagons, picking into the front one until it is filled. He then couples the rear empty wagon to the tractor and the loaded wagon behind and picks out to the end of the field where he drops the loaded wagon and picks up the third empty. When the three wagons are full, he couples them in a train behind the tractor. The change of wagons is made at any point in the field whenever a wagon is full. Being able to change wagons anywhere in the field has a tendency to cause filling of them and not part filling as would probably be the case if the wagon changes were always made at the end of the field.

The telescoping wagon tongue embodies some elements old in the art to which they relate. As to these features, they are of course public property and may be used freely. The tongue described herewith also embodies some novel features which are thought to be original, and it is the purpose of this publication to make such features available for free public use. It may be, however, that some features or improvements thereon are embodied in this design that are covered by existing patents and therefore it must be understood that the writers, the Experiment Station, or the U. S. Department of Agriculture do not assume any responsibility in connection with any claim of infringement that may be made against the apparatus shown.

Plans by which the telescoping tongue can be made in a well-equipped machine shop are available upon request to the Bureau of Agricultural Engineering.



Telescoping wagon tongue in extended position



Telescoping wagon tongue in contracted position

